Regarding such, it has been taken into account that the nanofibers have a very good thermal conductivity in their longitudinal direction, but a very poor thermal conductivity in the transverse direction, that a certain thickness for the intermediate organic material layer is required, in order to keep the nanofibers embedded in the organic matrix, and that the thermal conductive surfaces of the heat source and of the heat sink will always have a certain roughness, even if the surfaces are extensively machined, there still is a roughness, for example, in the range of 0.1 μm.

This means that the length of the majority of the nanofibers embedded in the organic matrix material should be between 1 and 100 μm so that at least a great number of the nanofibers provide for a thermal bridge in between the conductive surfaces of the heat source and the heat sink when extending with their longitudinal axis in between the surfaces.

In order to obtain the proper thermal conductivity between the heat source and the heat sink, it is also necessary to press the conductive surface of the heat source as well as of the heat sink against the intermediate layer, this means against the nanofibers, in order to provide for an improved thermal conductivity between the conductive surfaces of the heat source and the heat sink with the nanofibers and also in between the nanofiber material.

As the Examiner stated in her Official Action on page 2, Dani does not explicitly disclose the length of at least a majority of the nanofibers embedded in the organic matrix, nor does it disclose the fact that the heat source and the heat sink bear with their thermally conductive surfaces against the intermediate layer with a surface pressure between approximately 0.1 and 100 bar. These limitations are crucial. Yaniv et al. has nothing to do with an array or an apparatus and, more particularly, a thermally conductive mass for the intermediate layer of such an apparatus that enables the stable transfer of heat between a heat source and a heat sink over an extended period of operation. The patent merely refers to a method for aligning geometric anisotropic particles or to a method for manufacturing field emission devices in the form of electrically conductive sheets of cured plastic material. Further, there is no teaching in Yaniv for combination with Dani regarding the length of the nanofibers, nor is there teaching regarding the pressure exerted on the intermediate layer in between a heat source and a heat sink. To merely state that it would be obvious to take an unrelated disclosure that lacks in the teaching that is crucial to the current claimed invention in combination with the base reference Dani is deficient.

It is crucial that both features, the nanofiber length and surface pressure, be present to have the invention perform as desired. The teachings of the cited documents neither disclose nor suggest, in any way, the claimed invention.

Reconsideration of the refusal is requested. If any questions remain, please do not hesitate to contact the undersigned.

Respectfully submitted,

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